Dual Measurement Multimeter

GDM-8261

QUICK START GUIDE

GW INSTEK PART NO. 82DM-82610M01

ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

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INTRODUCTION

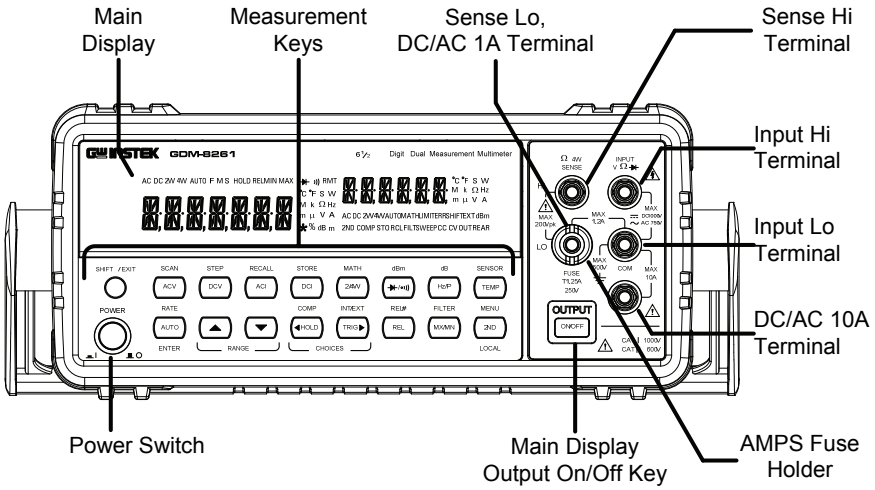
The GDM-8261 quick start guide is intended for users who are not familiar with the instrument and need a tutorial for quickly accessing its major functions. For further details including parameters, remote control commands, the optional scanner module, digital I/O and specifications, please refer to the user manual that is supplied on the accompanying CD.

Power up the instrument according to the "Powering Up" chapter, and then pick up the relevant chapter according to your needs. This guide consists of the following chapters:

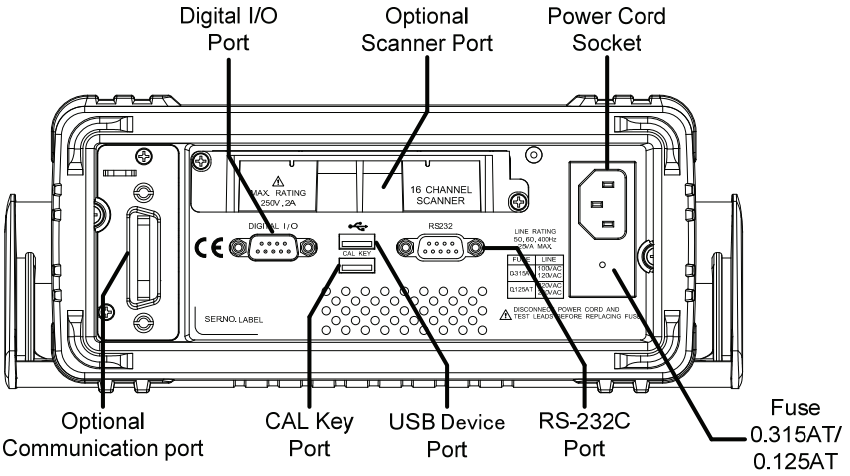
- Powering Up
- Basic Measurement
  - Voltage/Current
  - Resistance
  - Diode/Continuity/Frequency/Period/Temp
- Advanced Measurement
  - dBm/dB/Max/Min/Relative/Hold/Compare/Math
- Dual Measurement

Panel Overview

Front panel overview



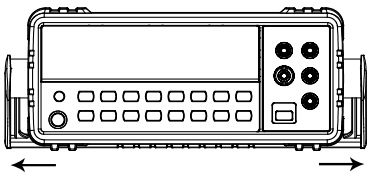
Rear Panel overview



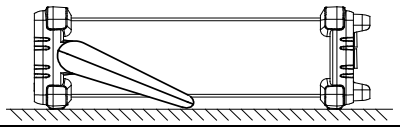
POWERING UP

1. Tilt stand

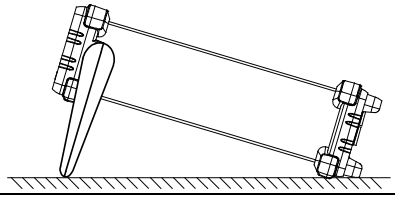
Pull out the handle sideways and rotate it.



Horizontal position

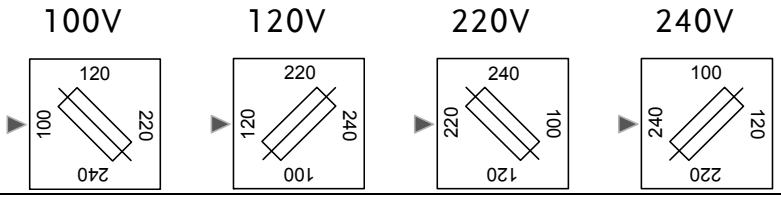


Tilt position



2. Line voltage selection

Ensure that the correct voltage is lined up with the arrow on the fuse cover on the rear panel.



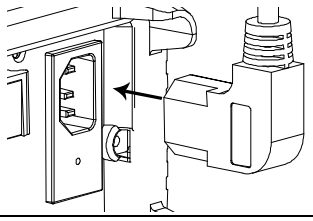
3. Fuse selection

Ensure the correct fuse is installed for the line voltage selected.

Fuse	Voltage
0.315AT	100VAC,120VAC
0.125AT	220VAC,240VAC

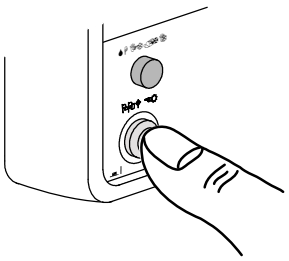
4. Connect the power cord

Connect the power cord to the AC Voltage input.



5. Press the power switch

Push the main power switch on the front panel to turn the instrument on.



The display contents appear and you are ready to make measurements.

Powering up the instrument is completed

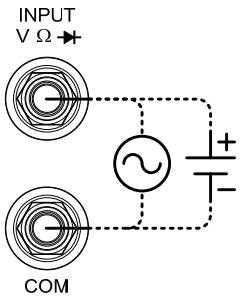
BASIC MEASUREMENT

Voltage/Current

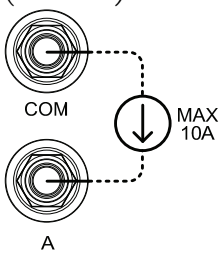
Measurement item: DCV, ACV, DCI, ACI

1. Connect the test leads

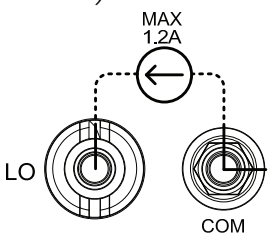
Voltage measurement



Current measurement (0~10A)

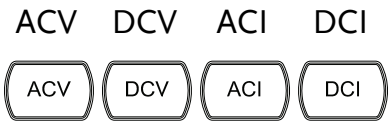


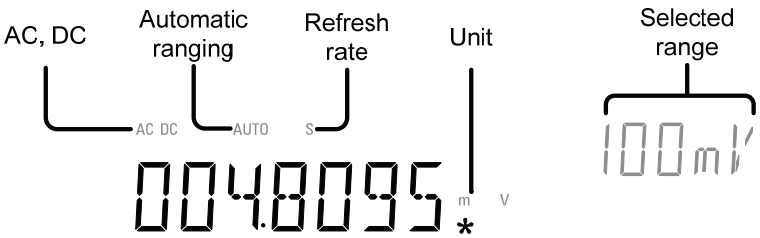
Current measurement (0~1.2A)



2. Press the measurement key

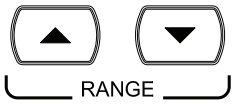
Press the measurement keys on the front panel. The measurement result will appear on the display.





Manual ranging

To select the measurement range manually, press the Up/Down keys.



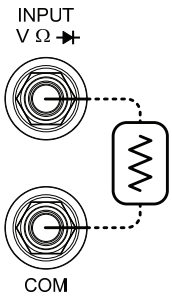
For further details, see the Voltage or Current section of the Basic Measurement chapter in the user manual

Resistance

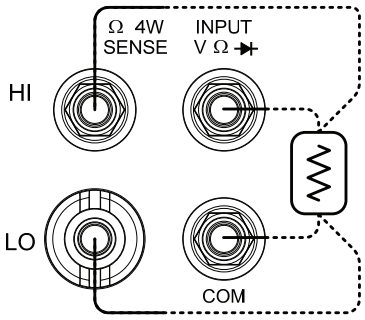
Measurement item: 2W resistance, 4W resistance

1. Connect the test leads

2W resistance



4W resistance



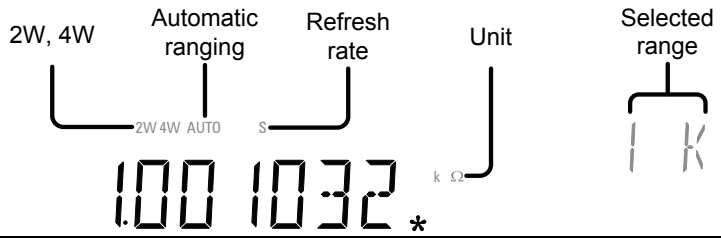
2. Press the measurement key

Press the measurement keys on the front panel. The measurement result will appear on the display.

2W resistance

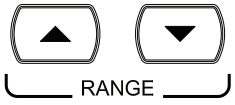
4W resistance

x 2 (twice)



Manual ranging

To select the measurement range manually, press the Up/Down keys.



For further details, see the Resistance section of the Basic Measurement chapter in the user manual

Diode/Continuity/Frequency/Period/ Temp

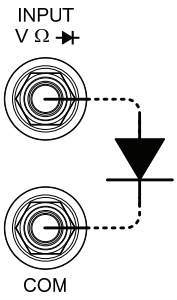
Measurement item: Diode test, Continuity test, Frequency, Period, Temperature

1. Connect the test leads

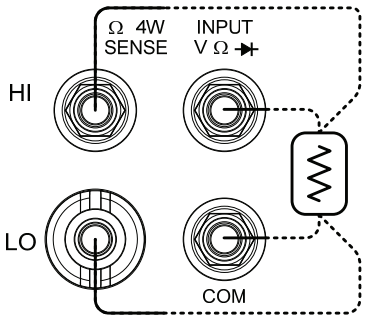
Diode/Continuity

Frequency/Period

Temperature (2W RTD, Thermocouple)



Temperature (4W RTD)

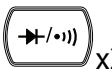


2. Press the measurement key

Press the measurement keys on the front panel (For Continuity, Period, and Temp(˚F), press the same key twice). The measurement result will appear on the display.

Diode

Continuity


x2 (twice)

Frequency

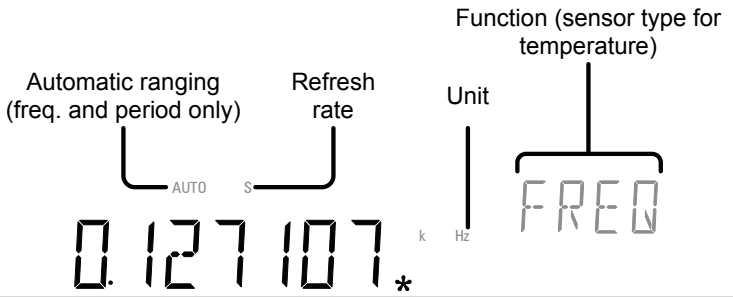
Period

x2 (twice)

Temp(˚C)

Temp(˚F)

x2 (twice)



For further details, see the Diode/Continuity/Frequency/Period/Temperature section of the Basic Measurement chapter in the user manual

ADVANCED MEASUREMENT

Measurement item: dBm, dB, Max, Min, Relative, Hold, Compare, Math

1. Make a basic measurement

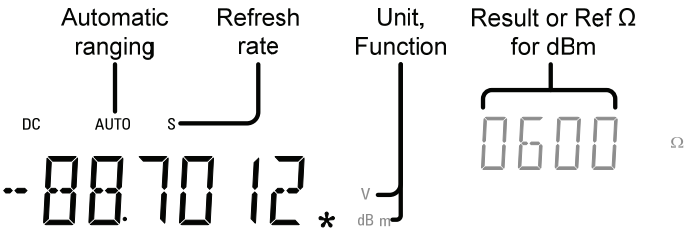
Follow the procedures in the Basic measurement chapter, page 8. For measurement combinations (basic + advanced), see page 12.

2. Press the measurement key

Press the measurement keys as shown below on the front panel. The measurement result will appear on the display.

Item	Keys	Descriptions
dBm	SHIFT/ EXIT → dBm (→/•))	Shows $10*\log_{10}(1000*Vrdg^2/Rref)$
dB	SHIFT/ EXIT → dB (Hz/P)	Shows (dBm − dBmref)
Max	MX/MN	Shows the maximum reading
Min	MX/MN x 2	Shows the minimum reading
Relative*	REL	Shows the relative value compared with the reference
Hold*	◀HOLD	The Hold measurement retains the current measurement data and updates it only when the reading fluctuates more than the threshold.

Compare*	SHIFT/ EXIT → COMP (HOLD)	The Compare measurement checks and updates if the measurement data stays between the upper (high) and lower (low) limit specified.
Math*	SHIFT/ EXIT → MATH (2/4W)	Math measurement runs four types of mathematical operations, MX+B, 1/X, Percentage and Statistic, based on the other measurement results.



For further details see the Advanced Measurement chapter in the user manual.
*Please see the Advanced Measurement chapter for operation details.

Basic + Advanced Measurement Combinations

Advanced Measurement	Basic Measurement					
	AC/DCV	AC/DCI	2/4W	Hz/P	TEMP	⊣/•))
dB	●	—	—	—	—	—
dBm	●	—	—	—	—	—
Max/Min	●	●	●	●	●	—
Relative	●	●	●	●	●	—
Hold	●	●	●	●	●	—
Compare	●	●	●	●	●	—
Math	●	●	●	●	●	—

DUAL MEASUREMENT

Dual Measurement Combinations

Combinations

The dual measurement mode allows you to use the 2nd display to show another item, thus viewing two different measurement results at once.

Any of the following items can be combined together for dual measurements (for example ACV + Hz, DCV + DCI)

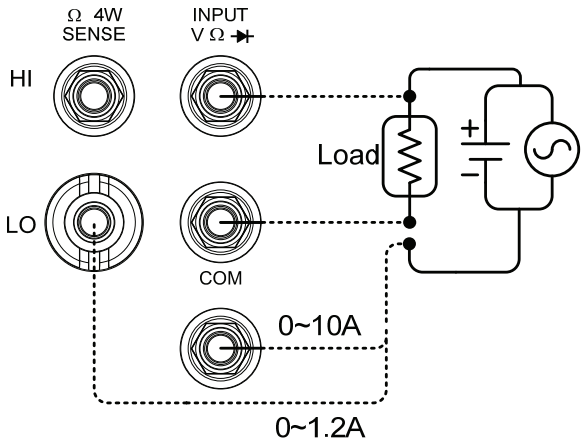
- ACV
- DCV
- ACI
- DCI
- 2W/4W
- Hz/P

Note

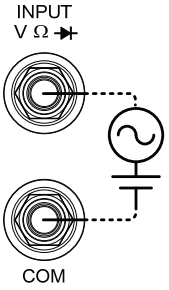
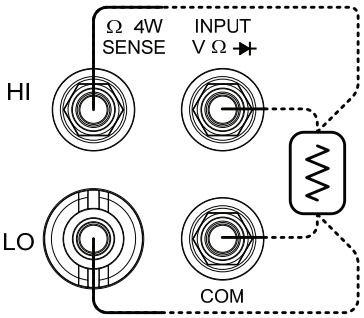
- 2W/4W measurements in combination with other measurements are possible but may not be practical as the measurement accuracy is not guaranteed.

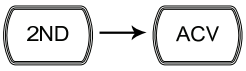
1. Connect the test leads

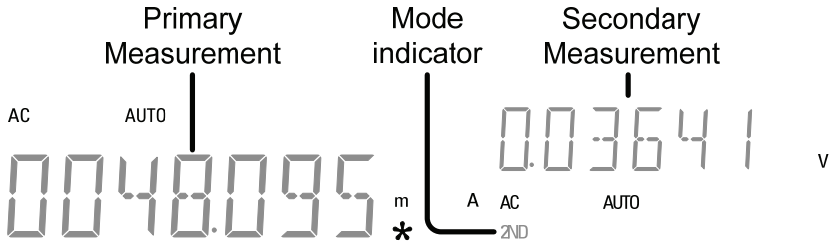
Voltage/Frequency/Period/Resistance and Current Measurement



Note: The above measuring configuration is used to measure the voltage present on the resistance under test and the current through the resistance under test when using the DCI/DCV or ACI/ACV dual measurement function.

	Voltage and Frequency/Period Measurement	2W/4W Resistance Measurement
		

2. Choose a primary measurement	Follow the procedures in the Basic measurement chapter to choose a primary measurement.	Page 8.
3. Choose a secondary measurement	Press the 2nd key, then the target item (example: ACV). The display updates the measurement result. (example: ACI + ACV)	



For further details, see the Dual Measurement chapter in the user manual.